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Dendrographium multiseptatum sp. nov. from China

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Abstract—A new species, *Dendrographium multiseptatum*, is described and illustrated from specimens collected on rotten twigs in China. This fungus is characterized by synnematous conidiophores with polytretic conidiogenous cells producing obclavate, 6–9-distoseptate, pale brown conidia.

Key words—asexual morph, microfungi, hyphomycete, taxonomy

Introduction

Dendrographium Massee was established by Massee (1892) to accommodate the Brazilian type species *D. atrum* Massee. The genus is characterized by synnematous, macronematous, unbranched conidiophores with polytretic, integrated, terminal (becoming intercalary), sympodial, cylindrical conidiogenous cells that produce solitary, acropleurogenous, simple, distoseptate conidia (Ellis 1971, Seifert & al. 2011). Species assignment in *Dendrographium* is based primarily on conidial morphology, including shape, septal number, size, pigmentation, and ornamentation. Six additional species have been described (all from India), but *Dendrographium kamatii* V.G. Rao with monotretic conidiogenous cells has been recombined as *Corynespora kamatii* (V.G. Rao) M.B. Ellis (Rao 1963, Ellis 1976). Ghosh & al. (1977) provided a comparison table for the six *Dendrographium* species (including *D. kamatii*) reported from India.

During a survey on wood-inhabiting microfungi in China, a new *Dendrographium* species was found. As this species did not match any of the currently described species in the genus, it is proposed here as new. Specimens are deposited in the Herbarium of Institute of Plant Protection, Shandong Academy of Agricultural Sciences, Jinan, Shandong, China (HSAAS) and the Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China (HMAS).

Taxonomy

Dendrographium multiseptatum L.G. Ma & J.S. Qi, **sp. nov.** FIG. 1

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Differs from *Dendrographium atrum* by its narrower conidiophores and its shorter, broader conidia with fewer distosepta and from *D. mitteri* by its longer synnemata, and solitary, shorter, 6–9-distoseptate conidia.

TYPE: China, Shandong Province, Taian City, Taishan District, on rotten twigs of an unidentified plant, 22 May 2018, L.G. Ma (**Holotype**, HSAAS 0415; **isotype**, HMAS 146095).

ETYMOLOGY: *multiseptatum*, referring to the numerous conidial septa.

COLONIES on the natural substratum effuse, black to dark brown, tufted. Mycelium mostly immersed in the substratum. Synnemata large, black, erect, tapered towards the apex, with dark brown stalks, consisting of parallel conidiophores, 520–1380 µm long, 25–85 µm diam. at the base. CONIDIOPHORES macronematous, synnematous, mostly adpressed along lower part of the length, divergent towards the upper part, unbranched, erect, straight or flexuous, cylindrical, septate, dark brown, smooth, thick-walled, brown towards the apex, ≤1400 µm long, 3.5–6.5 µm diam. CONIDIOGENOUS CELLS integrated, terminal becoming intercalary, polytretic, cylindrical, brown, smooth, thick-walled, 8–24 × 5.0–7.5 µm. CONIDIA solitary, acropleurogenous, simple, obclavate, 6-9-distoseptate, smooth, thick-walled, pale brown, 32–66 × 8–11.5 µm, tapered towards the apex, with a basal scar, truncate at the base, 2.5–3.5 µm diam.

COMMENTS—*Dendrographium multiseptatum* most closely resembles *D. atrum* and *D. mitteri* Syd. in conidial shape. However, *D. atrum* has broader (6–10 µm) conidiophores and longer and narrower conidia with more distosepta (40–130 × 7–9 µm, 6–15 distosepta; Massee 1892). *Dendrographium mitteri* differs by its shorter synnemata (170–250 µm) and occasionally catenate, longer (35–110 µm), 3–10-septate conidia (Sydow & Mitter 1933).

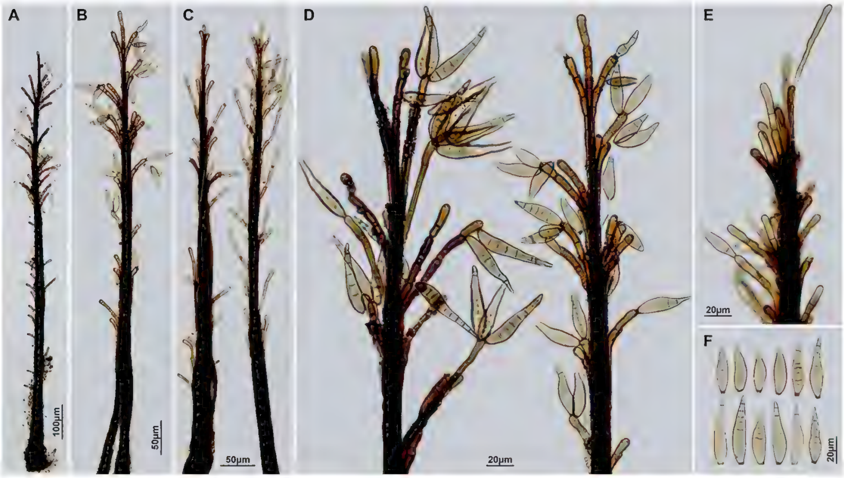

Fig. 1. *Dendrographium multiseptatum* (holotype, HSAAS 0415): A–D. Synnematous conidiophores, conidiogenous cells, and conidia; E. Synnematous conidiophores with conidiogenous cells and conidium; F. Conidia.

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